# Civic knowledge and open classroom discussion: explaining tolerance of corruption among 8th-grade students in Latin America

Article (Accepted Version)

# Civic knowledge and open classroom discussion: Explaining tolerance of corruption among 8th-grade students in Latin America

Carrasco, D[a]., Banerjee, R.[b], Treviño, E.[c], & Villalobos, C.[d]

[a]Pontificia Universidad Catolica de Chile, Centro de Medición MIDE UC

[b]University of Sussex, Psychology

[c]Pontificia Universidad Católica de Chile, Facultad de educación

[d]Pontificia Universidad Católica de Chile, Centro de Estudios de Políticas y Prácticas en Educación - CEPPE, Facultad de Educación

Research funded by the Ministerio de Educación, Gobierno de Chile, Comisión Nacional de Investigación Científica y Tecnológica CONICYT PIA 160007, Centro de Estudios Avanzados, and Fondo Nacional de Desarrollo Científico y Tecnológico FONDECYT 1180667

Correspondence concerning this article should be addressed to: Diego Carrasco, Centro de Medición MIDE UC, Pontificia Universidad Católica de Chile, Santiago, Chile; email: dacarras@uc.cl

**Abstract**

The endorsement of anti-corruption norms is a normative assumption in legal systems with freedom of information acts, where citizens are expected to act as monitors of the public service. Tolerance of corruption counteracts this assumption. We studied tolerance of corruption among 8th graders from Latin-American samples of the International Civic and Citizenship Study 2009. We proposed a model where associations between students' socioeconomic status (SES) and tolerance of corruption are explained by civic knowledge, authoritarianism and open classroom discussion. This model accounted for 36% to 43% of the variance within schools, and 87% to 96% of the variance between schools, across six countries. The socioeconomic gap in tolerance of corruption was mainly present between schools. In addition, students with higher civic knowledge were less tolerant of corruption, partially explained by authoritarianism, while open classroom discussion also had indirect associations with tolerance of corruption.

*Keywords*: authoritarianism, corruption, classroom discussion

## Introduction

Corruption is a threat to democracy. Countries that suffer from corruption also suffer from weaker institutions and political instability (Dimant & Tosato, 2018), less trust in government institutions (Seligson, 2006), and less support for democracy (Moreno, 2002), all of which serve to hinder governments' legitimacy. At present, Latin American countries are known to have some of the highest levels of corruption, higher than expected given their economic development (Morris, 2006).

Numerous countries have introduced legislation to promote freedom of information to combat corruption (Ackerman & Sandoval-Ballesteros, 2006), which enables their citizens to enforce more governmental transparency. However, the translation of such legislation into reduced corruption practices is heavily dependent on the role of the citizens themselves (Escaleras, Lin, & Register, 2010). The willingness of people to tolerate acts of corruption as commonplace and not worthy of punishment hinders the efforts to reduce corruption (Pop, 2012). From a social norms point of view, tolerance of corruption weakens democracy by normalising rule-breaking behaviour (Lavena, 2013).

Schools constitute one essential context for the promotion of anti-corruption efforts. At present, civic education is a feature of the educational curriculum for every Latin American country included in the present study: Chile, Colombia, Guatemala, Mexico, Paraguay, and the Dominican Republic (Bascopé, Bonhomme, Cox, Castillo, & Miranda, 2015). The present work investigates how civic knowledge, authoritarianism, and open classroom discussion explain tolerance of corruption among secondary students in the Latin American countries participating in the International Civic and Citizenship Study (ICCS) 2009. For these purposes, we fit a

multilevel path analysis to assess the expected relations and make inferences between schools. In the following sections, we review the literature and assert the expected relations among our chosen factors.

**Sophistication Hypothesis**

The "sophistication hypothesis" proposes that populations with higher levels of education develop more sophisticated political attitudes (Highton, 2009; Houtman, 2003; Luskin, 1990). More educated adults are expected to possess extensive and organised knowledge that structures political opinions, facts and concepts (Lyons, 2017). Studies using the World Values Survey have consistently found a small negative association between educational attainment and tolerance of corruption (Lavena, 2013; Zakaria, 2018).

The intergenerational transmission hypothesis (Schlozman, Verba, & Brady, 2013) asserts that political inequities between adults are transmitted from parents to their offspring. This occurs because more educated families provide a richer political environment for the development of different political outcomes, while also promoting the development of cognitive abilities required to influence those political outcomes (Miranda, 2018). Thus, we expect adolescent students from lower SES families to present more tolerance of corruption, replicating the gap observed among adults (Lavena, 2013; Zakaria, 2018). Moreover, following the sophistication hypothesis, we expected that these relations are largely mediated and explained by the students' current levels of political sophistication.

To assess the sophistication hypothesis, we include a direct measure of political sophistication included in the ICCS 2009 study: civic knowledge scores (Schulz, Fraillon, & Ainley, 2013, p. 336). The civic knowledge score ranks students in terms of knowledge, understanding and reasoning of political issues (Schulz, Ainley, & Fraillon, 2011). Students at

the lowest end of the scale understand the role of freedom of press to guarantee the accuracy of information delivered by news media. In contrast, students with the highest scores can explain more complex matters, such as evaluating a public policy concerning equality (Schulz et al., 2013). We expect students with a higher comprehension of political institutions and the code of law (Lavena, 2013), and a more complex capacity to reflect on political matters, to be less tolerant of corruption than their counterparts.

**Ideology as an Explanatory Factor**

Political ideology is a conceptual device that helps to explain why people do what they do, and what moral and political attitudes people hold (Jost, 2006). It consists of how attitudes, values and beliefs about the social order are organized (Jost, Federico, & Napier, 2009). Thus, knowing which political ideology people have, one can have expectations about their attitudes, values, and beliefs. Differing strategies have been used to study political ideology. Theory-driven approaches use self-identification of political orientation (e.g., Jost, Nosek, & Gosling, 2008), or specific ideological domains, including authoritarianism, social dominance, and system justification beliefs, among other measures (Jost et al., 2009). Among the different domains of ideological beliefs, authoritarianism has been widely studied as a consistent predictor of political orientation, prejudice, homophobia and sexism (Christopher & Wojda, 2008; Duckitt, Wagner, du Plessis, & Birum, 2002; Napier & Jost, 2008; Whitley & Lee, 2000).

Authoritarianism is a fundamental worldview (Duckitt & Sibley, 2009), consisting of an orientation of people to support strong authorities and punish social deviants (Altemeyer, 1981). Individual differences regarding corruption have shown that more authoritarian individuals express more corruption intentions than their less authoritarian peers (Tan, Liu, Zheng, & Huang, 2015), are more permissive towards authorities involved in unethical practices (Salamzadeh,

2012), and are more tolerant of corruption (Wang & Bernardo, 2017). This is due to a tendency to comply with the unethical behaviour from people who hold authority, and to be less prone to question such authorities (Son Hing, Bobocel, Zanna, & McBride, 2007). As such, we expect that students with higher levels of authoritarianism present higher levels of tolerance of corruption. The present study contributes to this line of research, by testing this relation among representative samples of 8th graders from six Latino-American countries.

The endorsement of authoritarianism is classically understood as an anti-democratic syndrome more prevalent in individuals of low educational attainment (Lipset, 1959). Economically disadvantaged groups present higher levels of authoritarianism, especially for the facets of obedience to authority (Napier & Jost, 2008). Following the intergenerational transmission hypothesis, we expect students from lower socio-economic status families to endorse higher authoritarianism. Complementary to this, previous studies have consistently found a negative relation between civic knowledge and authoritarianism (Schulz, Ainley, Cox, & Friedman, 2018; Schulz, Ainley, Friedman, & Lietz, 2011). This means that enhanced civic knowledge may serve as a safeguard against authoritarianism endorsement. Following these latter studies, we specify students' political sophistication as a negative predictor of students' authoritarianism. Consequently, we include authoritarianism as a mediator of the relationship between SES, civic knowledge, and tolerance of corruption.

**School Practices: The Role of Discussions**

Within the literature of political socialisation and civic education, classroom discussion is considered a relevant factor in how the school promotes citizenship skills (Almond & Verba, 1989; Grossman, 2011; Hahn & Tocci, 1990). Past research has shown that open classroom discussion has positive relations with civic knowledge (Isac, Maslowski, Creemers, & van der

Werf, 2014; Persson, 2015), and negative relations with authoritarianism (Hahn & Tocci, 1990), among several other civic outcomes (Knowles & McCafferty-Wright, 2015). All in all, open classroom discussion possesses a large body of literature in favour of its positive returns.

Open classroom discussion is a classroom environment feature which differentiates the extent to which students are encouraged to express their opinions and discuss different points of view, guided by their teacher (Ehman, 1969; Hahn, 2011). It refers to the extent to which students are able to discuss issues with their peers and with their teachers (Ehman, 1969), and distinguishes whether or not students within the classroom can debate different sides of an argument when discussing social and political issues (Carrasco & Torres Irribarra, 2018). This classroom feature enhances political knowledge because it encourages students to articulate questions and answers, in a meaningful context, facilitating the understanding of controversies (Harris, 1996).

**Classroom Discussion and Student's SES**

It is assumed that open classroom discussion has a compensatory role in the political socialization of students. Schools provide learning opportunities that are fewer or absent at home for low SES students (Hoskins, Janmaat, & Melis, 2017), because open discussion is less frequent among less affluent families (Bernstein, 2003). Thus, it is expected to mitigate the effect of the lack of political socialisation of disadvantaged students (Hoskins et al., 2017).

However, the access to open classrooms discussion might not be equal for all students. In school effectiveness research, this is referred to as the question of a learning opportunity gap, where the access to certain school practices is not equally distributed within the population of students (Akiba, LeTendre, & Scribner, 2007). This line of research in civic education is limited, and we have found two examples of these studies, from the US and from the UK. Kahne &

Middaugh (2008), found that more disadvantaged students in the US have less access to service learning and to the exercise of debates, than the students from more affluent families. Hoskin, Janmaat & Melis (2017) found a small positive relation between students' SES and open classroom discussion among British students. In the current study, we assess the learning opportunity gap, by studying the relationship between students' SES and schools' open classroom discussion, for 8$^{th}$ graders among six Latin-American countries.

**Classroom Discussion and Authoritarianism**

A higher exposure to open classroom discussion is expected to be negatively related to authoritarianism (Hahn, 2011). Simultaneously, as noted above, authoritarianism is expected to be positively related to tolerance of corruption (Salamzadeh, 2012; Wang & Bernardo, 2017). Furthermore, schools with more frequent open classroom discussion are expected to improve civic knowledge, while simultaneously reducing or preventing authoritarianism endorsement (Schulz et al., 2018; Schulz, Ainley, Friedman, et al., 2011). Thus, higher exposure to open classroom discussion might present indirect relations to tolerance of corruption via authoritarianism and civic knowledge.

Intergenerational research indicates that authoritarianism is transmitted from parents to offspring, directly and indirectly through need for closure (Dhont, Roets, & Van Hiel, 2013). Need for closure is an individual difference where people tend to think of reality in simple structures, reflected in a desire to have a single clear answer to a given issue (De keersmaecker et al., 2017), even if it is an oversimplification. As such, school programs aimed at reducing need for closure may have returns in other political attitudes explained by authoritarianism (Van Hiel, Pandelaere, & Duriez, 2004). Open classroom discussion seems a good candidate for this end: it fosters students' tolerance of dissent (Ehman, 1980), it helps to evaluate others views critically,

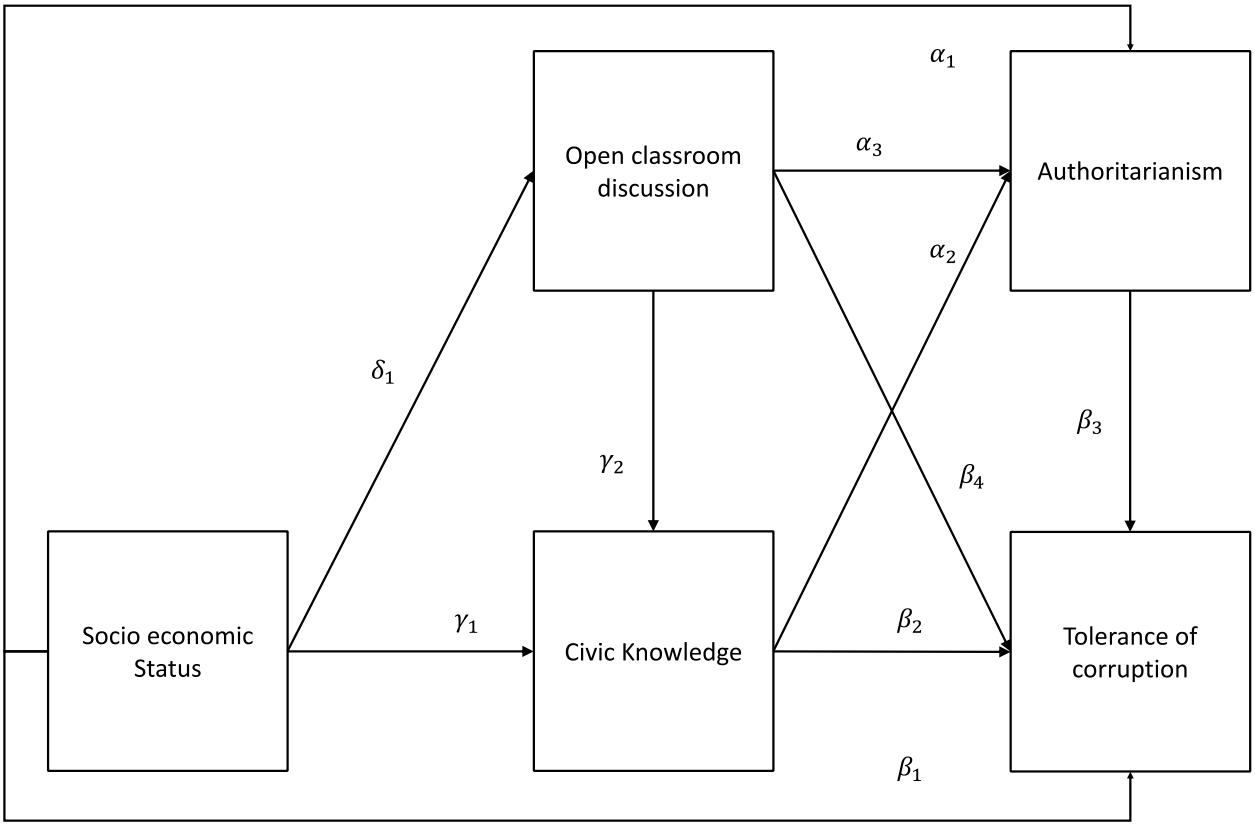
and it promotes the exercise of agreeing to disagree (Claes, Maurissen, & Havermans, 2017), all aspects that countervail need for closure.

**The Present Study**

In the present study we fit a series of multilevel path analyses to assess what factors account for students' tolerance of corruption in different Latin-American countries. With these modelling techniques we assess the direct and indirect effects of SES, via open classroom discussion, civic knowledge, and authoritarianism, while providing cluster specific inferences between learning environments.

First, we argue that it is not the SES of students *per se* that makes them at risk of being more tolerant of corruption, but the lack of civic knowledge (Schulz & Macaskill, 2015). Hence, we make the hypothesis that civic knowledge is a mediator for the effects of SES on tolerance of corruption and on authoritarianism (Napier & Jost, 2008). Furthermore, because of the negative relation between authoritarianism and civic knowledge (Schulz et al., 2018; Schulz, Ainley, Friedman, et al., 2011), and its expected positive relation to tolerance of corruption (Wang & Bernardo, 2017) we include authoritarianism as a second potential mediator in the relationship between SES and tolerance of corruption. Additionally, we estimate the predictive effect of SES on open classroom discussion, following the learning opportunity gap hypothesis (Hoskins et al., 2017; Kahne & Middaugh, 2008). Likewise, we include direct effects from open classroom discussion to civic knowledge (Isac et al., 2014; Persson, 2015), and to authoritarianism (Hahn & Tocci, 1990) following previous literature. Finally, we also include direct effects of open classroom discussion on tolerance of corruption to assess its relative influence. Figure 1 depicts our main conceptual model, which includes all expected relations between variables.

Figure 1. Conceptual model to explain tolerance of corruption among students




With these models, we aim to answer the following questions: what are the main predictors of tolerance of corruption among 8th graders in the Latino American samples of ICCS 2009? What is the relationship between SES and tolerance of corruption? What are the main drivers of the socioeconomic gap in tolerance of corruption? How much of these differences are attributable to the learning opportunity gap concerning open classroom discussion? What is the relationship between open classroom discussion and tolerance of corruption, and is this association indirect via civic knowledge and authoritarianism? What is the relationship between civic knowledge and tolerance of corruption, and is this association indirect via authoritarianism?

# Method

## Data

The present study uses ICCS 2009 data. It includes representative samples of 8th grade students (13.5 years of age) from Chile, Colombia, Dominican Republic, Guatemala, Mexico and Paraguay. It samples intact school classrooms from around 150 schools, collecting data from over 3000 students for each country (for more details see Schulz, Ainley, Friedman, et al., 2011).

## Measures

From ICCS 2009 we retrieved several multi-item scale scores generated using item response theory (IRT) methods. Table 1 summarizes the selected variables, including their means and standard deviations at the population level. The main dependent variable in the present study is tolerance of corruption. This is a scale of 5 items, where students indicated their level of agreement with items such as 'It is acceptable for a civil servant to use the resources of the institution in which he/she works for personal benefit'. As predictors of tolerance of corruption, we include authoritarianism, civic knowledge, open classroom discussion, and SES. Authoritarianism summarizes the endorsement of authoritarian practices from the government, using the responses to 9 items. This scale includes items such as 'People in government must enforce their authority even if it means violating the rights of some citizens', and 'Concentration of power in one person guarantees order'. A detailed report on the construction of each questionnaire scale can be found in ICCS 2009 Technical Report (Schulz, Ainley, & Fraillon, 2011).

Table 1
*Population Means (Standard Deviations), and Sampled Observations for Each Country*

| | Chile | Colombia | Dominican Republic | Guatemala | Mexico | Paraguay |
|---|---|---|---|---|---|---|
| Tolerance of Corruption (COR) | 48.64 | 48.18 | 54.84 | 49.94 | 49.17 | 49.53 |
| | (10.44) | (9.22) | (9.08) | (9.48) | (10.57) | (9.62) |
| Socioeconomic Status (SES) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | (1.00) | (1.00) | (1.00) | (1.00) | (1.00) | (1.00) |
| Civic Knowledge (CIV) | 483.02 | 461.93 | 380.25 | 434.57 | 451.65 | 423.7 |
| | (87.52) | (80.85) | (66.38) | (75.7) | (82.81) | (88.88) |
| Authoritarianism (AUT) | 48.00 | 48.49 | 54.18 | 50.17 | 48.97 | 50.3 |
| | (10.52) | (9.16) | (10.08) | (8.84) | (10.99) | (8.95) |
| Classroom discussion (OPD) | 52.32 | 50.14 | 47.34 | 52.61 | 50.12 | 49.45 |
| | (10.09) | (8.83) | (9.97) | (9.57) | (9.36) | (8.61) |
| Number of schools | 177 | 196 | 145 | 145 | 215 | 149 |
| Number of Students | 5192 | 6204 | 4589 | 4002 | 6576 | 3399 |

*Note.* Population means, and standard deviations point estimates, accounting for sampling design. Nominal samples for each country are included.

Civic knowledge is represented by five plausible values, with an international mean of 500 and a standard deviation of 100 (Brese, Jung, Mirazchiyski, Schulz, & Zuehlke, 2011). It is a measure of political sophistication (Schulz et al., 2013) that includes knowledge and understanding of civics and citizenship. The SES of students is a derived index using the highest occupational status and the highest educational level of students' parents, and the number of books at home. The measure of open classroom discussion is a multi-item scale (6 items) assessing students' reports on how often 'teachers encourage students to express their opinions', when discussing political and social issues during regular lessons. All these Likert-type scales

are multi-item IRT weighted likelihood estimate scores with an international mean of 50 and standard deviation of 10 for equally weighted countries.

**Statistical Analysis**

We specify a series of multilevel path analyses to assess the overall relations among SES, open classroom discussion, civic knowledge, authoritarianism, and tolerance of corruption. Driven by the reviewed literature, we include all interrelations among our main variables. We produce estimates for each country, and also fit a multigroup model, where parameters were constrained to be equal between countries to resemble meta-analytic estimates (Möller, Pohlmann, Köller, & Marsh, 2009). These latter estimates are the most likely estimates for the studied relations across countries, while accounting for their standard errors simultaneously.

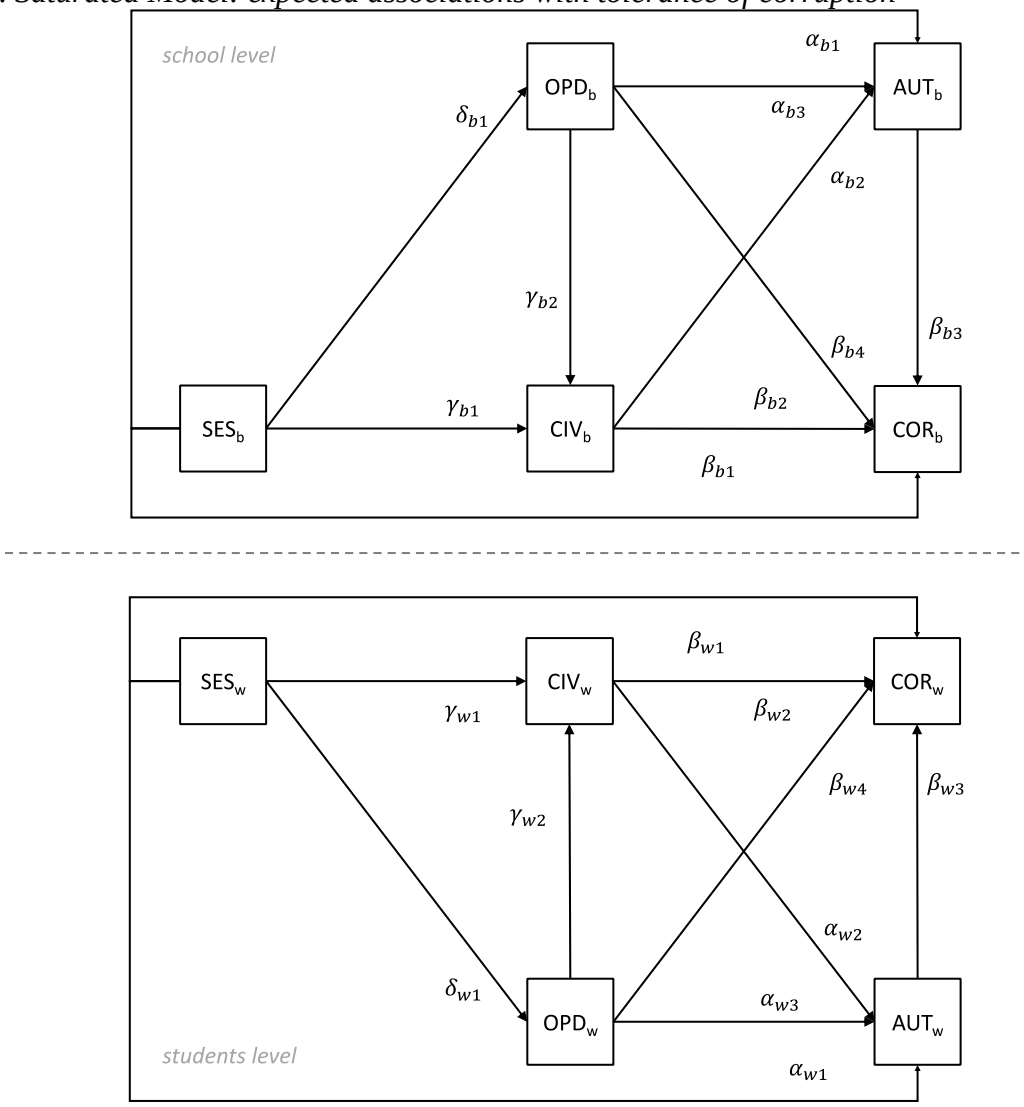
To describe the main results, we refer to the constrained model estimates presented in Tables 3A and 3B in the left-hand side column. We also present the results from each country in contiguous columns. We describe the main results using the constrained model and highlight the country specific results when noticeable heterogeneity is observed, that is, when country specific estimates of the confidence interval do not overlap with the confidence interval of estimates in the constrained model.

We first estimated the saturated model with all the expected relations. We used the results of this model to identify the main predictors of tolerance of corruption among students, and to assess the indirect effects of SES, particularly estimating how much of the SES effect is accounted for by the learning opportunity gap in open classroom discussion. To assess the proportion of the indirect effect attributable to the mediators, we compute the $R^2$ mediated effect, and the proportion of the absolute overall effect that is mediated. The $R^2$ mediated effect is an

overall measure of how much of the explained variance is attributable to the included mediators (Fairchild, MacKinnon, Taborga, & Taylor, 2009). To assess the proportion of the indirect effect attributable to the learning opportunity gap, we compute proportion of the absolute overall effect that is mediated (Fairchild & McQuillin, 2010) by open classroom discussion.

We specified an alternative model with fewer parameters, where we constrained the parameters of SES on authoritarianism and on tolerance of corruption to zero. This latter model expresses a full mediation model where SES is connected to tolerance of corruption only via its mediators. We assessed if this constrained model presents an acceptable fit to the data (Heck & Thomas, 2015; Masyn, 2013). We used this model comparison to assess the intergenerational-sophistication hypothesis, where SES effects are expected to predict tolerance of corruption and authoritarianism through student's civic knowledge. The saturated model is displayed in Figure 2.

Figure 2: *Saturated Model: expected associations with tolerance of corruption*




*Note.* SES = socioeconomic status of students, CIV = civic knowledge, AUT = authoritarianism, OPD = classroom discussion, COR = tolerance of corruption. _w = stands for within school centred variables, and _β = stands for between school components centred at the grand mean.

All statistical analyses were conducted with MPLUS 8.2 (Muthén & Muthén, 2017) to account for complex sample design (Rutkowski, Gonzalez, Joncas, & von Davier, 2010), which uses pseudo maximum likelihood for variance estimation (Asparouhov & Muthén, 2010; Stapleton, 2013). To avoid ill-scaled variance matrices due to the scale differences, we divided civic knowledge scores by 10 (see Kline, 2016, p. 81). To fit these models, all endogenous

variables (SES, civic knowledge and authoritarianism) were separated into two orthogonal components: the within school variation (centred within cluster), and the between school variation (centred to the grand mean of each country). Because open classroom discussion is a reflective measure of a school attribute (Stapleton, Yang, & Hancock, 2016), the between-schools component is the measure of interest. When students act as informants about the school discussion practices (Lüdtke et al., 2008), the school component expresses learning environment differences, while the within school component expresses deviations of individual students' perceptions from those of their peers in the same school.

Overall, this centring approach enables us to pool all the results into a synthetic model, where between-country differences were removed. Using a regression analysis with fixed effects for countries, we found that countries only account for 5% of the variance in tolerance of corruption at population level. Thus, our modelling choices offer a reasonable alternative to produce interpretable estimates for all the data.

## Results

### Model fit

The intra class correlation of tolerance of corruption was .10, CI95% [.09; .12] in the constrained model, varying from .08 to .14 between countries. The fitted model accounts for 41% of the within variance, and it varies from 36% to 43%. At the between level, this model accounts for 92%, varying from 87% to 96%. In Table 2, we report these fit indexes of the saturated model, and the intra class correlation of tolerance of corruption for each participating country.

Table 2
*Intra Class correlation of tolerance of corruption and explained variance of the saturated model*

| | ICC Tolerance of Corruption | $R^2$ Student Level | $R^2$ School Level |
|---|---|---|---|
| Multigroup | .10 | .41 | .92 |
| Chile | .10 | .41 | .91 |
| Colombia | .08 | .36 | .94 |
| Dominican Republic | .12 | .43 | .87 |
| Guatemala | .12 | .42 | .93 |
| Mexico | .09 | .43 | .96 |
| Paraguay | .14 | .42 | .93 |

*Note.* ICC = intra class correlation for the null model of tolerance of corruption.

**Main predictors of Tolerance of corruption**

At the student level, the predictor with the greatest effect size on tolerance of corruption is authoritarianism. In the multigroup model, its standardized effect is of .52 (*SE* =.01, CI95% [.50, .54], $p<.001$), and in each of the countries, we found similar estimates (see Table 3A). Thus, students with higher levels of authoritarianism were more tolerant of corruption. The predictor of tolerance of corruption, with the next largest coefficient is civic knowledge. It reaches a standardized effect of -.19 (*SE* =.01, CI95% [-.21, -.17], $p<.001$) in the constrained model, and this effect is larger for Guatemala, where its standardized effect is -.26 (*SE* =.02, CI95% [-.31, -.22], $p<.001$). As such, students with higher civic knowledge are less inclined to accept corruption. Note that student SES presents no significant direct effects on tolerance of corruption in the constrained model ($\beta$ = .01, *SE* =.01, CI95% [-.01, .02], $p=.25$). Country specific results of this covariate overlap with the constrained model confidence interval.

In Table 3B, we present the school level estimates. The predictor with the highest size is again authoritarianism, with a standardized effect in the constrained model of .84 (*SE* =.03, CI95% [.78, .89], $p<.001$). For Guatemala, this effect is smaller than the rest of the countries,

reaching a standardized effect of .59 (*SE* =.07, CI95% [.46, .72], *p*<.001). Thus, schools with higher levels of authoritarianism present higher levels of tolerance of corruption in comparison to other schools. In addition, schools with higher civic knowledge present lower levels of tolerance of corruption, reaching a standardized effect of -.19 (*SE* =.04, CI95% [-.26, -.11], *p*<.001) in the constrained model. Inspecting the country specific results, we found that Guatemala presents a larger coefficient than the rest of the compared countries, where its standardized effect is of -.41 (*SE* =.09, CI95% [-.59, -.23], *p*<.001), whereas Paraguay and the Dominican Republic present non-significant effects on this estimate. However, all country estimates overlap with the confidence interval of the constrained model. Finally, the school-level SES does not have a significant direct association with tolerance of corruption ($\beta$ = .02, *SE* =.03, CI95% [-.04, .08], *p*=.52), with the exception of Colombia, where a positive relation is observed, albeit with a wide confidence interval ($\beta$ = .17, *SE* =.08, CI95% [.01, .32], *p*<.05). No significant direct effect of open classroom discussion was observed among all countries.

Table 3A
*Multilevel path analysis student level estimates*

| | | Multigroup | | Chile | | Colombia | | Dominican Republic | | Guatemala | | Mexico | | Paraguay | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Direct effects | SES→COR | 0.09 | | 0.06 | | 0.26 | | 0.06 | | 0.37 | * | -0.08 | | -0.15 | |
| | | ( .01) | | ( .00) | | ( .02) | | ( .01) | | ( .03) | | (-.01) | | (-.01) | |
| | CIV→COR | -0.26 | *** | -0.29 | *** | -0.23 | *** | -0.26 | *** | -0.40 | *** | -0.25 | *** | -0.18 | *** |
| | | (-.19) | | (-.21) | | (-.18) | | (-.18) | | (-.26) | | (-.18) | | (-.14) | |
| | AUT→COR | 0.53 | *** | 0.52 | *** | 0.51 | *** | 0.51 | *** | 0.51 | *** | 0.53 | *** | 0.62 | *** |
| | | ( .52) | | ( .50) | | ( .49) | | ( .55) | | ( .46) | | ( .54) | | ( .56) | |
| | OPD→COR | -0.02 | ** | -0.02 | | -0.02 | | 0.00 | | -0.05 | ** | -0.02 | | -0.02 | |
| | | (-.02) | | (-.02) | | (-.01) | | ( .00) | | (-.06) | | (-.02) | | (-.01) | |
| | SES→AUT | 0.13 | | -0.26 | | 0.18 | | 0.19 | | 0.16 | | 0.13 | | 0.34 | |
| | | ( .01) | | (-.02) | | ( .02) | | ( .02) | | ( .02) | | ( .01) | | ( .03) | |
| | CIV→AUT | -0.68 | *** | -0.71 | *** | -0.62 | *** | -0.69 | *** | -0.63 | *** | -0.78 | *** | -0.53 | *** |
| | | (-.50) | | (-.52) | | (-.49) | | (-.44) | | (-.46) | | (-.55) | | (-.46) | |
| | OPD→AUT | -0.02 | ** | 0.01 | | -0.02 | | -0.07 | *** | -0.08 | *** | 0.00 | | -0.05 | * |
| | | (-.02) | | ( .01) | | (-.02) | | (-.07) | | (-.09) | | ( .00) | | (-.05) | |
| | SES→CIV | 0.80 | *** | 1.25 | *** | 0.85 | *** | 0.25 | | 0.83 | *** | 0.76 | *** | 1.03 | *** |
| | | ( .10) | | ( .13) | | ( .10) | | ( .04) | | ( .11) | | ( .08) | | ( .11) | |
| | OPD→CIV | 0.15 | *** | 0.13 | *** | 0.20 | *** | 0.16 | *** | 0.12 | *** | 0.13 | *** | 0.16 | *** |
| | | ( .20) | | ( .17) | | ( .25) | | ( .26) | | ( .19) | | ( .16) | | ( .19) | |
| | SES→OPD | 0.26 | ** | 0.03 | | 0.50 | ** | 0.27 | | 0.15 | | 0.29 | | 0.15 | |
| | | ( .02) | | ( .00) | | ( .05) | | ( .02) | | ( .01) | | ( .02) | | ( .02) | |
| Indirect effects | CIV → AUT → COR | -0.36 | *** | -0.37 | *** | -0.32 | *** | -0.35 | *** | -0.32 | *** | -0.41 | *** | -0.33 | *** |
| | | (-.26) | | (-.26) | | (-.24) | | (-.24) | | (-.21) | | (-.30) | | (-.26) | |

*Note.* *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$. Unstandardized estimates (Standardized estimates). SES = socioeconomic status of students, CIV = civic knowledge, AUT = authoritarianism, OPD = classroom discussion, COR = tolerance of corruption.

Table 3B

*Multilevel path analysis school level estimates*

| | | Multigroup | | Chile | | Colombia | | Dominican Republic | | Guatemala | | Mexico | | Paraguay | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Direct effect estimates | SES→COR | 0.11 | | 0.57 | | 0.70 | * | -0.07 | | -0.46 | | 0.04 | | -0.54 | |
| | | ( .02) | | ( .11) | | ( .17) | | (-.01) | | (-.08) | | ( .01) | | (-.08) | |
| | CIV→COR | -0.14 | *** | -0.16 | * | -0.14 | * | -0.10 | | -0.30 | *** | -0.08 | * | 0.04 | |
| | | (-.19) | | (-.22) | | (-.22) | | (-.10) | | (-.41) | | (-.11) | | ( .06) | |
| | AUT→COR | 0.70 | *** | 0.76 | *** | 0.74 | *** | 0.62 | *** | 0.51 | *** | 0.74 | *** | 0.91 | *** |
| | | ( .84) | | ( .85) | | ( .87) | | ( .91) | | ( .59) | | ( .90) | | ( .91) | |
| | OPD→COR | 0.00 | | 0.03 | | 0.00 | | 0.06 | | 0.02 | | -0.02 | | -0.10 | |
| | | ( .00) | | ( .03) | | ( .00) | | ( .07) | | ( .02) | | (-.02) | | (-.09) | |
| | SES→AUT | -0.38 | | 0.49 | | -0.17 | | 0.58 | | -0.36 | | -0.83 | | -0.96 | |
| | | (-.06) | | ( .08) | | (-.03) | | ( .07) | | (-.06) | | (-.14) | | (-.15) | |
| | CIV→AUT | -0.48 | *** | -0.63 | *** | -0.42 | *** | -0.42 | * | -0.51 | ** | -0.49 | *** | -0.41 | *** |
| | | (-.56) | | (-.77) | | (-.59) | | (-.31) | | (-.61) | | (-.58) | | (-.62) | |
| | OPD→AUT | -0.15 | * | -0.09 | | -0.19 | ** | -0.48 | | -0.04 | | -0.08 | | -0.04 | |
| | | (-.14) | | (-.09) | | (-.20) | | (-.36) | | (-.03) | | (-.06) | | (-.04) | |
| | SES→CIV | 4.21 | *** | 4.82 | *** | 3.35 | *** | 2.80 | *** | 5.09 | *** | 4.28 | *** | 4.84 | *** |
| | | ( .57) | | ( .66) | | ( .48) | | ( .48) | | ( .65) | | ( .62) | | ( .48) | |
| | OPD→CIV | 0.40 | *** | 0.36 | ** | 0.36 | ** | 0.28 | * | 0.32 | ** | 0.52 | *** | 0.47 | ** |
| | | ( .30) | | ( .30) | | ( .28) | | ( .29) | | ( .24) | | ( .36) | | ( .29) | |
| | SES→OPD | 1.88 | *** | 1.72 | ** | 2.37 | *** | 2.00 | * | 2.64 | *** | 0.40 | | 3.57 | *** |
| | | ( .33) | | ( .28) | | ( .44) | | ( .33) | | ( .44) | | ( .08) | | ( .57) | |
| Indirect effect estimates | SES → AUT → COR | -0.27 | | 0.37 | | -0.12 | | 0.36 | | -0.18 | | -0.61 | | -0.88 | |
| | | (-.05) | | ( .07) | | (-.03) | | ( .06) | | (-.03) | | (-.13) | | (-.13) | |
| | SES → CIV → COR | -0.57 | *** | -0.78 | * | -0.45 | * | -0.27 | | -1.51 | *** | -0.34 | | 0.18 | |
| | | (-.11) | | (-.15) | | (-.11) | | (-.05) | | (-.27) | | (-.07) | | ( .03) | |
| | SES → OPD → COR | 0.00 | | 0.05 | | -0.01 | | 0.12 | | 0.05 | | -0.01 | | -0.34 | |
| | | ( .00) | | ( .01) | | ( .00) | | ( .02) | | ( .01) | | ( .00) | | (-.05) | |
| | SES → CIV → AUT → COR | -1.41 | *** | -2.29 | *** | -1.05 | *** | -0.72 | | -1.32 | ** | -1.55 | *** | -1.79 | *** |
| | | (-.26) | | (-.44) | | (-.25) | | (-.13) | | (-.23) | | (-.32) | | (-.27) | |
| | SES → OPD → AUT → COR | -0.20 | * | -0.11 | | -0.33 | * | -0.59 | ** | -0.05 | | -0.02 | | -0.13 | |
| | | (-.04) | | (-.02) | | (-.08) | | (-.11) | | (-.01) | | ( .00) | | (-.02) | |
| | SES → OPD → CIV → COR | -0.10 | *** | -0.10 | | -0.11 | * | -0.05 | | -0.25 | * | -0.02 | | 0.06 | |
| | | (-.02) | | (-.02) | | (-.03) | | (-.01) | | (-.04) | | ( .00) | | ( .01) | |
| | SES → OPD → CIV → AUT → COR | -0.25 | *** | -0.29 | ** | -0.26 | ** | -0.15 | | -0.22 | | -0.08 | | -0.62 | ** |
| | | (-.05) | | (-.06) | | (-.06) | | (-.03) | | (-.04) | | (-.02) | | (-.10) | |
| | OPD → AUT → COR | -0.11 | * | -0.07 | | -0.14 | ** | -0.30 | * | -0.02 | | -0.06 | | -0.04 | |
| | | (-.11) | | (-.08) | | (-.18) | | (-.33) | | (-.02) | | (-.06) | | (-.04) | |
| | OPD → CIV → COR | -0.05 | *** | -0.06 | | -0.05 | * | -0.03 | | -0.10 | ** | -0.04 | | 0.02 | |
| | | (-.06) | | (-.07) | | (-.06) | | (-.03) | | (-.10) | | (-.04) | | ( .02) | |
| | OPD → CIV → AUT → COR | -0.13 | *** | -0.17 | ** | -0.11 | ** | -0.07 | | -0.08 | * | -0.19 | ** | -0.17 | ** |
| | | (-.14) | | (-.20) | | (-.14) | | (-.08) | | (-.09) | | (-.19) | | (-.16) | |
| | CIV → AUT → COR | -0.34 | *** | -0.48 | *** | -0.31 | *** | -0.26 | | -0.26 | ** | -0.36 | *** | -0.37 | *** |
| | | (-.47) | | (-.66) | | (-.52) | | (-.28) | | (-.36) | | (-.52) | | (-.56) | |

*Note.* *** p < 0.001, ** p < 0.01, * p < 0.05. Unstandardized estimates (Standardized estimates). SES = socioeconomic status of students, CIV = civic knowledge, AUT = authoritarianism, OPD = classroom discussion, COR = tolerance of corruption.

**Socio economic status and tolerance of corruption**

We next evaluated a model where we constrained all parameters to zero from the saturated model, with the exception of the direct effects of SES on tolerance of corruption, thus estimating only parameters $\beta_{b1}$ and $\beta_{w1}$ from Figure 2. With this model, we retrieve the total effect of SES on tolerance of corruption. At the student level, this standardized coefficient is negative and small for the constrained model ($\beta$ = -.03, *SE* = .01, CI95% [-.05; -.02], p<.001). All country specific results overlap with this estimate confidence interval, and are non-significant for all countries, with the exception of Chile ($\beta$ = -.07, *SE* = .02, CI95% [-.11; -.02], p<.01) and Paraguay ($\beta$ = -.05, *SE* = .02, CI95% [-.09; -.00], p<.05), where both countries present small correlations.

At the school level, the picture is different. We found a large negative relation between school SES and tolerance of corruption in the constrained model ($\beta$ = -.61, *SE* = .04, CI95% [-.68; -.53], p<.001). All countries present similar results, with the exception of Guatemala, where we found a larger gap between schools in comparison to the rest of the countries ($\beta$ = -.81, *SE* = .05, CI95% [-.91; -.70], p<.001).

Considering the results from this latter model, in comparison to the saturated model, we can suspect that school-level SES has indirect effects on tolerance of corruption. This is because the direct effects of SES are very small or null in the saturated model, whereas in the total effect model, we found a positive correlation between school SES and tolerance of corruption levels between schools. To assess how SES is related to tolerance of corruption indirectly, we inspect three different results: a) the fit of a full mediation model, b) the role played by the learning opportunity gap in terms of open classroom discussion, and c) the indirect effects of SES via the other variables from the saturated model.

We refit the saturated model constraining the direct effect of SES on tolerance of corruption to zero, and we constrained in a similar way the direct effect of SES on authoritarianism (parameters $\beta_{b1}$, $\beta_{w1}$, $\alpha_{b1}$, $\alpha_{w1}$ from Figure 2, all set to zero). With this model, we are assessing if the full mediation model hypothesis is tenable. That is, can the total relations of SES and tolerance of corruption can be fully explained by the mediators we proposed? This model expresses the intergenerational-sophistication hypothesis, where the socio-economic status of the parents and its relations to tolerance of corruption and to authoritarianism, are explained by students' levels of civic knowledge. This model specification fits the data well in all the included countries, with a nonsignificant chi square ($\chi^2(4)$ [min =1.28, max =8.15], p >=.09). However, the constrained model, reaches acceptable relative fit indexes (CFI >= .95, RMSEA <=.05, SRMR <= .08) (Hancock & Mueller, 2010) only when variance terms are free between countries (CFI = .98, RMSEA =.02, SRMR within = .02, SRMR between = .06). These indexes are presented in Table 4.

Table 4
*Model fit of the fully mediated models*

| | Multigroup | Chile | Colombia | Dominican Republic | Guatemala | Mexico | Paraguay |
|---|---|---|---|---|---|---|---|
| $\chi^2$ | 270.41 | 3.83 | 8.15 | 1.28 | 4.25 | 3.23 | 6.38 |
| Df | 104 | 4 | 4 | 4 | 4 | 4 | 4 |
| $\chi^2$ p value | .00 | .43 | .09 | .86 | .37 | .52 | .17 |
| Parameters | 106 | 31 | 31 | 31 | 31 | 31 | 31 |
| Deviance | 819588.47 | 147265.92 | 168815.69 | 119091.59 | 108810.18 | 183962.94 | 91047.34 |
| AIC | 819800.47 | 147327.92 | 168877.69 | 119153.59 | 108872.18 | 184024.94 | 91109.34 |
| BIC | 820680.66 | 147531 | 169086.38 | 119352.69 | 109067.21 | 184235.4 | 91299.18 |
| CFI | .98 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| RMSEA | .02 | .00 | .01 | .00 | .00 | .00 | .01 |
| SRMR within | .02 | .00 | .01 | .01 | .01 | .00 | .01 |
| SRMR between | .06 | .02 | .02 | .01 | .01 | .02 | .03 |

*Note.* Mean point estimates of fit indexes over five multiple imputations are reported.

We inspect the opportunity learning gap, using the saturated model, represented by parameter $\delta_{b1}$ in Figure 2. This parameter estimates the relationship of schools' SES and open classroom discussion levels between schools. We found a positive correlation in the constrained model ($\beta$ = .33, *SE* = .06, CI95% [.22; .44], p<.001). All countries' results on this parameter overlap with the confidence interval of this estimate from the constrained model. We found one exception, Paraguay, where a larger opportunity gap was found ($\beta$ = .57, *SE* = .06, CI95% [.46; .69], p<.001).

**SES indirect effects at school level**. In the constrained model (see Table 3B), we found that the largest standardized indirect effect of SES occurs sequentially, via the school's civic knowledge and via school's authoritarianism, to school's tolerance of corruption ($\beta$ = -.26, *SE* = .03, CI95% [-.32; -.21], p<.001). The second largest indirect effects were observed via school's civic knowledge levels alone ($\beta$ = -.11, *SE* = .02, CI95% [-0.15; -0.06], p<.001). The country specific results for these two indirect effects overlaps with the estimated confidence interval of the constrained model.

Using the standardized indirect estimates of SES presented in Table 3B, we compute the absolute overall effect (Fairchild & McQuillin, 2010). Using this overall effect as a denominator, we calculate the proportion of the absolute overall effect involving open classroom discussion, between SES and tolerance of corruption at the school level. This method is recommended when there are different signs between the predictor and all the included mediators (Fairchild & McQuillin, 2010). As we have described earlier, authoritarianism is a positive predictor of tolerance of corruption, whereas the rest of the predictors present negative relations to tolerance of corruption. With the constrained model, we found an $R^2$ mediated effect of 44% with a proportion of 19% of the absolute effect accounted by indirect effects involving open classroom

discussion. These indexes between countries are presented in Table 5. With these results, we show that a non-ignorable portion of the indirect effects between SES of the schools onto tolerance of corruption is related to the learning opportunity gap.

Table 5
*$R^2$ mediated effect and proportion of the absolute effects attributable to the indirect effects at the school level*

| | | | Proportions of the Abs. overall effect | | |
|---|---|---|---|---|---|
| | $R^2$ Mediated Effect | Abs. overall effect | All indirect effects | Via Open Classroom Discussion | Via Civic knowledge and Authoritarianism |
| Multigroup | .44 | .55 | .96 | .19 | .77 |
| Chile | .47 | .87 | .88 | .12 | .75 |
| Colombia | .23 | .72 | .77 | .24 | .53 |
| Dominican Republic | .29 | .43 | .97 | .39 | .58 |
| Guatemala | .72 | .72 | .89 | .14 | .75 |
| Mexico | .43 | .56 | .99 | .05 | .94 |
| Paraguay | .57 | .69 | .88 | .25 | .63 |

*Note.* 'Abs. overall effect' is the sum of all standardized coefficients, regardless of sign of effect.

**Open classroom discussion and its indirect effects at the school level**

Open classroom discussion at the school levels had significant indirect effects on tolerance of corruption in the constrained model (see Table 3B), via schools' civic knowledge ($\beta$ = -.06, *SE* = .01, CI95% [-.08; -.03], p<.001) and via authoritarianism ($\beta$ = -.11, *SE* = .04, CI95% [-.20; -.02], p<.05), and additionally via the sequential indirect effect from civic knowledge via authoritarianism to tolerance of corruption ($\beta$ = -.14, *SE* = .02, CI95% [-.18; -.10], p<.001). These estimates are of small size. All country specific-results overlap with the confidence interval of the estimates of the constrained model, for these three indirect effects. Thus, is expected that open classroom discussion contributes to lower tolerance of corruption among students in schools, in an indirect way, given its positive relations with civic knowledge, and negative relations with authoritarianism.

**Civic knowledge and its indirect effects**

Civic knowledge of the students presents direct and indirect effects to tolerance of corruption. At the student level, a portion of the total effect of civic knowledge occurs via its negative relation with authoritarianism. In the constrained model (see Table 3A) the standardized estimate of this indirect effect is of -.26 (*SE* = .01, CI95% [-0.27; -0.24], p<.001), and accounts for 58% of the total effect. All country specific results overlap with this confidence interval, with the exception of Guatemala, where this indirect effect is smaller ($\beta$ = -.21, *SE* = .01, CI95% [-0.24; -0.18], p<.001). At the school level, we observe a similar result (see Table 3B); there is a negative indirect effect from schools' level of civic knowledge to tolerance of corruption via schools' authoritarianism ($\beta$ = -.47, *SE* = .04, CI95% [-.55; -.38], p<.001), accounting for 70% of the total effect. Specific estimates from each country for this indirect effect overlap with this later confidence interval. Thus, in general, the effect of civic knowledge on tolerance of corruption is partially mediated by authoritarianism levels, between students and between schools.

## Discussion

Our analysis helps us to understand and predict 8$^{th}$ grade students' tolerance of corruption across and within six Latin-American countries. Students with high endorsement of authoritarianism are more prone to tolerance of corruption, in comparison to their peers. It may be assumed that this occurs because authoritarians submit to authority, and struggle to view legitimate authorities under a critical light, complying with their unethical behaviour when this occurs (Son Hing et al., 2007; Wang & Bernardo, 2017). The present study provides support for this relation, using representative samples of secondary students. In addition, corroborating the intergenerational-sophistication hypothesis, we show that civic knowledge is a negative predictor

of tolerance of corruption, over and above the socioeconomic status of the students' families. Civic knowledge is a direct measure of political sophistication (Schulz et al., 2013), which covers the comprehension of political institutions and the code of law (Lavena, 2013), while it differentiates students regarding their capacity for political reflection (Schulz et al., 2013). Understanding the consequences of corrupt acts is a negative predictor of corruption acceptance (Wang & Bernardo, 2017), hence it seems that students with higher civic knowledge are more equipped to engage in such reflection and express less tolerance of corruption.

Additionally, students with more political proficiency tend to be less authoritarian. Opposition to totalitarian rule requires students to acknowledge the duties and limits of authorities within the boundaries of democracy. Because more politically sophisticated students can critically evaluate institutions and government officials' functioning, they are less tolerant of corruption. Successful civic and citizenship educational efforts should not only teach students content, but also critical thinking; indeed, civic competence includes questioning authorities when it is needed (Marquette, 2007). Specifically, these results suggest that civic knowledge, understood here as a measure of students' political sophistication, is relevant both to lower authoritarianism and to lower tolerance of corruption. Thus, schools promoting higher civic knowledge have higher chances to develop a student population that condemns and denounces acts of corruption.

Crucially, our results show that open classroom discussion contributes to explaining tolerance of corruption and authoritarianism in Latin America, in an indirect way. School practices that promote political sophistication and the understanding of opposing views may serve to protect students from endorsing authoritarian beliefs, and as a consequence, from condoning corruption. Conversely, in school environments where classroom discussion of

political and social issues is lacking, students are at higher risk of authoritarianism, and of becoming citizens who respond leniently to the corruption of public officials. This occurs in an indirect way, via its positive association with civic knowledge and its negative association with authoritarianism.

The socioeconomic gap of tolerance of corruption was found in our study to be larger between schools than between students (within schools). There was a large correlation between school's socioeconomic status and tolerance of corruption, and this indicates a double jeopardy (Caro & Lenkeit, 2012): students from low SES families appear to attend schools that promote higher rather than lower chances of tolerance of corruption. This is a worrisome result from an equity point of view. A non-ignorable portion of this effect is related to the learning opportunity gap, in that students from low SES backgrounds attend schools which are less likely to exhibit open classroom discussion, and thereby yield lower levels of civic knowledge, higher levels of authoritarianism, and higher tolerance of corruption.

These results suggest the need to have a more complete picture of how schools can build citizenship attributes among students to condemn corruption, a situation that can be addressed along different SES strata, where students vary systematically in their levels of civic knowledge. Ensuring students have access to open classroom discussion of social and political issues could be regarded as a key learning opportunity for civic education that potentially brings returns in many citizenship outcomes (Knowles & McCafferty-Wright, 2015).

**Limitations**. Given the cross-sectional nature of the presented data, results cannot guarantee causal claims (Hancock & Mueller, 2010). However, the presented results follow a theory driven specification of how different factors explain tolerance of corruption. We used the

term “effect” often, to refer to structurally defined parameters in a statistical model (Rabe-Hesketh & Skrondal, 2012) that expresses our theoretical expectations.

Also, open classroom discussion is not perceived in a homogenous way between students (Claes et al., 2017). The model specification we chose produces estimates which are separate from students’ classroom perception deviations. Specifically, we separated the deviation component of students within schools from the school level classroom discussion. This enabled us to generate school level inferences for open classroom discussion, while accounting for heterogeneity in students’ perceptions within school (Lüdtke, Robitzsch, Trautwein, & Kunter, 2009).

Finally, we used a constrained multigroup multilevel model to produce synthetic results that modelled the pattern of relations across countries. As such, we judged if the specific country results showed major departures from this general model. For this, we rely on a strict criterion: results were deemed different enough from the model when their confidence intervals did not overlap. Using this criterion, we did not find many departures of the country specific results from the multigroup estimate. Guatemala presented larger effects of civic knowledge on tolerance of corruption, and a larger socioeconomic gap for tolerance of corruption at the school level. Among the included countries, Guatemala possess a national curriculum that lacks coverage on civic values and principles, and content on institutions in comparison to the rest of the countries (Bascopé et al., 2015). This scenario may help to interpret these observed effects in line with the sophistication hypothesis. Additionally, Paraguay displayed a larger opportunity gap, where access to open classroom discussion was more strongly related to the school socioeconomic composition than the rest of the countries. These specific differences require further research.

**Concluding remarks.** From an educational perspective, these findings suggest that student characteristics and school processes together predict students' tolerance of corruption. Notwithstanding the limitations of the research discussed above, we believe that enhancing students' civic knowledge to understand the rules of Latin American democracies should ideally be coupled with efforts to improve teachers' abilities to promote open classroom discussions of political and social issues. From a conceptual perspective, the evidence presented suggests focusing on civic knowledge alone may not be enough to reduce the tolerance of corruption. Instead, having the possibility of engaging in open discussions within the classroom may be key to fostering the understanding of complex political matters and critical thinking to question authorities when needed. This school practice offers positive returns by potentially lowering authoritarianism, and as a consequence, lowering the tolerance of corruption.

From the sophistication hypothesis (Houtman, 2003; Lipset, 1959), it is expected that participating in education promotes less authoritarianism. However, not all school environments have these effects on students: there is a substantial gap between vocational and mainstream schools, where only mainstream schools diminish authoritarianism in time (Vollebergh, 1996). A challenge for schools and teachers is to promote classroom discussion of controversial issues, but this is difficult to implement within authoritarian schools, and tends to be avoided (Quaynor, 2012).

Successful implementation of anticorruption efforts, such as the three-pronged model (Gong & Wang, 2013), require purposeful alignment from authorities and schools, so that teachers can promote critical thinking and guided discussions of controversial issues involving corruption. If democratic systems expect their citizens to participate in accountability efforts to prevent corruption, it is necessary that the system also provides students with the adequate

learning opportunities for such a task. Not all students have access to the same learning opportunities, such as classroom discussion (Hoskins et al., 2017). Tilting the learning opportunity gap in the opposite direction is a democratic necessity.

## References

Ackerman, J. M., & Sandoval-Ballesteros, I. E. (2006). The global explosion of freedom of information laws. *Administrative Law Review*, *58*(1), 85–130. Retrieved from https://www.jstor.org/stable/40712005

Akiba, M., LeTendre, G. K., & Scribner, J. P. (2007). Teacher quality, opportunity gap, and national achievement in 46 countries. *Educational Researcher*, *36*(7), 369–387. https://doi.org/10.3102/0013189X07308739

Almond, G. A., & Verba, S. (1989). *The civic culture:political attitudes and democracy in five nations.* Los Angeles, CA: SAGE Publications Inc.

Altemeyer, B. (1981). *Right-wing authoritarianism*. Winnipeg: University of Manitoba Press.

Asparouhov, T., & Muthén, B. (2010). *Resampling methods in Mplus for complex survey data*. Los Angeles, CA: Muthén & Muthén.

Bascopé, M., Bonhomme, M., Cox, C., Castillo, J. C., & Miranda, D. (2015). Curricular guidelines and citizenship attitudes in Latin American students: a comparative analysis. *Revista Latinoamericana de Ciencias Sociales, Niñez y Juventud*, *13*(2), 1169–1190. Retrieved from http://revistaumanizales.cinde.org.co/rlcsnj/index.php/Revista-Latinoamericana/article/view/2008

Bernstein, B. (2003). *Class, codes and control: Applied studies towards a sociology of language (Vol. 2)*. London: Routledge.

Brese, F., Jung, M., Mirazchiyski, P., Schulz, W., & Zuehlke, O. (2011). *ICCS 2009 user guide for the international database, Supplement 3*. Amsterdam: International Association for the Evaluation of Educational Achievement (IEA).

Caro, D. H., & Lenkeit, J. (2012). An analytical approach to study educational inequalities: 10

hypothesis tests in PIRLS 2006. *International Journal of Research and Method in Education*, *35*(1), 3–30. https://doi.org/10.1080/1743727X.2012.666718

Carrasco, D., & Torres Irribarra, D. (2018). The role of classroom discussion. In A. Sandoval-Hernández, M. M. Isac, & D. Miranda (Eds.), *Teaching Tolerance in a Globalized World* (pp. 87-101) Netherlands: Springer International Publishing. https://doi.org/10.1007/978-3-319-78692-6

Christopher, A. N., & Wojda, M. R. (2008). Social dominance orientation, right-wing authoritarianism, sexism, and prejudice toward eomen in the workforce. *Psychology of Women Quarterly*, *32*(1), 65–73. https://doi.org/10.1111/j.1471-6402.2007.00407.x

Claes, E., Maurissen, L., & Havermans, N. (2017). Let's talk politics: Which individual and classroom compositional characteristics matter in classroom discussions? *Young*, *25*(4_suppl), 18S-35S. https://doi.org/10.1177/1103308816673264

De keersmaecker, J., Roets, A., Dhont, K., Van Assche, J., Onraet, E., & Van Hiel, A. (2017). Need for closure and perceived threat as bases of right-wing authoritarianism: A longitudinal moderation approach. *Social Cognition*, *35*(4), 433–449.

Dhont, K., Roets, A., & Van Hiel, A. (2013). The intergenerational transmission of need for closure underlies the transmission of authoritarianism and anti-immigrant prejudice. *Personality and Individual Differences*, *54*(6), 779–784. https://doi.org/10.1016/j.paid.2012.12.016

Dimant, E., & Tosato, G. (2018). Causes and effects of corruption: What has past decade's empirical research taught us? A Survey. *Journal of Economic Surveys*, *32*(2), 335–356. https://doi.org/10.1111/joes.12198

Duckitt, J., & Sibley, C. G. (2009). A dual-process motivational model of ideology, politics, and

prejudice. *Psychological Inquiry*, *20*(2–3), 98–109. https://doi.org/10.1080/10478400903028540

Duckitt, J., Wagner, C., du Plessis, I., & Birum, I. (2002). The psychological bases of ideology and prejudice: Testing a dual process model. *Journal of Personality and Social Psychology*, *83*(1), 75–93. https://doi.org/10.1037//0022-3514.83.1.75

Ehman, L. H. (1969). An analysis of the relationships of selected educational variables with the political socialization of high school students. *American Educational Research Journal*, *6*(4), 559–580. https://doi.org/10.3102/00028312006004559

Ehman, L. H. (1980). The American school in the political socialization. *Review of Educational Research*, *50*(1), 99–119. Retrieved from https://www.jstor.org/stable/1170032

Escaleras, M., Lin, S., & Register, C. (2010). Freedom of information acts and public sector corruption. *Public Choice*, *145*(3), 435–460. https://doi.org/10.1007/s11127-009-9574-0

Fairchild, A. J., MacKinnon, D. P., Taborga, M. P., & Taylor, A. B. (2009). R2 effect-size measures for mediation analysis. *Behavior Research Methods*, *41*(2), 486–498. https://doi.org/10.3758/BRM.41.2.486

Fairchild, A. J., & McQuillin, S. D. (2010). Evaluating mediation and moderation effects in school psychology: A presentation of methods and review of current practice. *Journal of School Psychology*, *48*(1), 53–84. https://doi.org/10.1016/j.jsp.2009.09.001

Gong, T., & Wang, S. (2013). Indicators and Implications of zero Tolerance of corruption: The case of Hong Kong. *Social Indicators Research*, *112*(3), 569–586. https://doi.org/10.1007/s11205-012-0071-3

Grossman, D. (2010). 'Talking' about pedagogy: Classroom discourse and citizenship education. In K. Kennedy, W.O. Lee & D. Grossman (Eds.). *Citizenship Pedagogies in Asia and the*

*Pacific*, (pp. 15–33). Hong Kong: Hong Kong University, Comparative Education Research Centre.

Hahn, C. L. (2011). Issues-Centred pedagogy and classroom climate for discussion: A view from the United States. In *Citizenship pedagogies in Asia and the Pacific* (pp. 315–331). Dordrecht: Springer Netherlands. https://doi.org/10.1007/978-94-007-0744-3_15

Hahn, C. L., & Tocci, C. M. (1990). Classroom climate and controversial issues discussions: A five nation study. *Theory and Research in Social Education*, *18*(4), 344–362. https://doi.org/10.1080/00933104.1990.10505621

Hancock, G. R., & Mueller, R. O. (Eds.) (2010). *The reviewer's guide to quantitative methods in the Social Sciences*. New York and London: Routledge/Taylor & Francis Group.

Harris, D. (1996). Assessing discussion of public issues: Performance criteria. In R. Evans & D. W. Saxe (Eds.), *Handbook on teaching social issues* (pp. 289–297). Washington, DC: National Council for the Social Studies. Retrieved from https://files.eric.ed.gov/fulltext/ED410141.pdf

Heck, R. H., & Thomas, S. L. (2015). *An introduction to multilevel modeling techniques: MLM and SEM approaches using MPLUS*. New York and Hove: Routledge.

Highton, B. (2009). Revisiting the relationship between educational attainment and political sophistication. *The Journal of Politics*, *71*(4), 1564-1576. https://doi.org/10.1017/S0022381609990077

Hoskins, B., Janmaat, J. G., & Melis, G. (2017). Tackling inequalities in political socialisation: A systematic analysis of access to and mitigation effects of learning citizenship at school. *Social Science Research*, *68*, 88–101. https://doi.org/10.1016/j.ssresearch.2017.09.001

Houtman, D. (2003). Lipset and "working-class" authoritarianism. *The American Sociologist*,

*34*(1–2), 85–103. https://doi.org/10.1007/s12108-003-1008-8

Isac, M. M., Maslowski, R., Creemers, B., & van der Werf, G. (2014). The contribution of schooling to secondary-school students' citizenship outcomes across countries. *School Effectiveness & School Improvement*, *25*, 29–63. https://doi.org/10.1080/09243453.2012.751035

Jost, J. T. (2006). The end of the end of ideology. *American Psychologist*, *61*(7), 651–670. https://doi.org/10.1037/0003-066X.61.7.651

Jost, J. T., Federico, C. M., & Napier, J. L. (2009). Political ideology: its structure, functions, and elective affinities. *Annual Review of Psychology*, *60*, 307–337. https://doi.org/10.1146/annurev.psych.60.110707.163600

Jost, J. T., Nosek, B. a., & Gosling, S. D. (2008). Ideology: Its resurgence in social, personality, and political Psychology. *Perspectives on Psychological Science*, *3*(2), 126–136. https://doi.org/10.1111/j.1745-6916.2008.00070.x

Kahne, J., & Middaugh, E. (2008). Democracy for some: The civic opportunity gap in High School. (CIRCLE Working Paper N° 59). Retrieved from http://www.civicyouth.org/PopUps/WorkingPapers/WP59Kahne.pdf

Kline, R. B. (2016). *Principles and practice of Structural Equation Modeling* (4th ed.). New York, London: The Guilford Press.

Knowles, R. T., & McCafferty-Wright, J. (2015). Connecting an open classroom climate to social movement citizenship: A study of 8th graders in Europe using IEA ICCS data. *Journal of Social Studies Research*, *39*(4), 255–269. https://doi.org/10.1016/j.jssr.2015.03.002

Lavena, C. F. (2013). What determines permissiveness toward corruption? *Public Integrity*,

*15*(4), 345–365. https://doi.org/10.2753/PIN1099-9922150402

Lipset, S. M. (1959). Democracy and working-class authoritarianism. *American Sociological Review*, *24*(4), 482–501. Retrieved from http://www.jstor.org/stable/2089536

Lüdtke, O., Marsh, H. W., Robitzsch, A., Trautwein, U., Asparouhov, T., & Muthén, B. (2008). The multilevel latent covariate model: a new, more reliable approach to group-level effects in contextual studies. *Psychological Methods*, *13*(3), 203–229. https://doi.org/10.1037/a0012869

Lüdtke, O., Robitzsch, A., Trautwein, U., & Kunter, M. (2009). Assessing the impact of learning environments: How to use student ratings of classroom or school characteristics in multilevel modeling. *Contemporary Educational Psychology*, *34*(2), 120–131. https://doi.org/10.1016/j.cedpsych.2008.12.001

Luskin, R. C. (1990). Explaining political sophistication. *Political Behavior*, *12*(4), 331–361. https://doi.org/10.1007/BF00992793

Lyons, P. (2017). *Political knowledge in the Czech republic*. Prague: Institute of Sociology of the Czech Academy of Sciences

Marquette, H. (2007). Civic education for combating corruption: lessons from Hong Kong and the US for donor-funded programmes in poor countries. *Public Administration and Development*, *27*(3), 239–249. https://doi.org/10.1002/pad.461

Masyn, K. E. (2013). Latent Class analysis and finite mixture modeling. In T. D. Little (Ed.), *The Oxford Handbook of Quantitative Methods* (1st ed., Vol. 2, pp. 551–611). New York, NY: Oxford University Press. https://doi.org/10.1093/oxfordhb/9780199934898.013.0025

Miranda, D. (2018). *Desigualdad y Ciudadanía: Una aproximación intergeneracional*. [Inequality and Citizenship: An intergenerational approach] (Doctoral dissertation). .

Retrieved from Pontificia Universidad Católica de Chile website: https://repositorio.uc.cl/bitstream/handle/11534/22255/DMiranda_PhD_Tesis_Versión_Entregada_ISUC.pdf

Moreno, A. (2002). Corruption and Democracy: A Cultural Assessment. *Comparative Sociology*, *1*(3), 495–507. https://doi.org/10.1163/156913302100418556

Möller, J., Pohlmann, B., Köller, O., & Marsh, H. W. (2009). A meta-analytic path analysis of the internal/external frame of reference model of academic achievement and academic self-Concept. Review of Educational Research, 79(3), 1129–1167. https://doi.org/10.3102/0034654309337522

Morris, S. D. (2006). Coruption in Latin America. *The Latin Americanist*, *49*(2), 5–16. https://doi.org/10.1111/j.1557-203X.2006.tb00073.x

Muthén, L. K., & Muthén, B. (2017). *Mplus User's Guide* (Eight Ed.). Los Angeles, CA: Muthén & Muthén. Retrieved from http://www.statmodel.com/

Napier, J. L., & Jost, J. T. (2008). The "antidemocratic personality" revisited: A cross-national investigation of working-class authoritarianism. *Journal of Social Issues*, *64*(3), 595–617. https://doi.org/10.1111/j.1540-4560.2008.00579.x

Persson, M. (2015). Classroom climate and political learning: Findings from a Swedish panel study and comparative data. *Political Psychology*, *36*(5), 587–601. https://doi.org/10.1111/pops.12179

Pop, I. (2012). Acceptance of corrupt Acts: a comparative study of values regarding corruption in Europe. *Journal of Social Research & Policy*, *3*(1), 27-42.

Quaynor, L. J. (2012). Citizenship education in post-conflict contexts: A review of the literature. *Education, Citizenship and Social Justice*, *7*(1), 33–57.

https://doi.org/10.1177/1746197911432593

Rabe-Hesketh, S., & Skrondal, A. (2012). *Multilevel and longitudinal modeling using Stata, Volumes I and II, Third Edition* (3rd ed.). College Station, TX: Stata Press.

Rutkowski, L., Gonzalez, E., Joncas, M., & von Davier, M. (2010). International large-scale assessment data: Issues in secondary analysis and reporting. *Educational Researcher*, *39*(2), 142–151. https://doi.org/10.3102/0013189X10363170

Salamzadeh, Y. (2012). Role of emotionality and authoritarianism in unethical behaviors and their effect on organizational citizenship behavior: The case of fars gas company, Iran. *World Applied Sciences Journal*, *17*(4), 502–508. Retrieved from http://www.idosi.org/wasj/wasj17(4)12/15.pdf

Schlozman, K. L., Verba, S., & Brady, H. E. (2013). *The unheavenly chorus: Unequal political voice and the broken promise of American democracy.* Princeton, NJ: Princeton University Press.

Schulz, W., Ainley, J., Cox, C., & Friedman, T. (2018). *Young people's views of government, peaceful coexistence, and diversity in five Latin American countries*. Cham: Springer International Publishing. https://doi.org/10.1007/978-3-319-95393-9

Schulz, W., Ainley, J., & Fraillon, J. (2011). *ICCS 2009 Technical Report*. Retrieved from International Association for the Evaluation of Educational Achievement (IEA) website: http://www.iea.nl/fileadmin/user_upload/Publications/Electronic_versions/ICCS_2009_Technical_Report.pdf

Schulz, W., Ainley, J., Friedman, T., & Lietz, P. (2011). *ICCS 2009 Latin American Report*. Retrieved from International Association for the Evaluation of Educational Achievement (IEA) website:

http://www.iea.nl/fileadmin/user_upload/graphics/Publications/ICCS_2009_LA_Report.pdf

Schulz, W., Fraillon, J., & Ainley, J. (2013). Measuring young people's understanding of civics and citizenship in a cross-national study. *Educational Psychology, 33*(3), 327–349. https://doi.org/10.1080/01443410.2013.772776

Schulz, W., & Macaskill, G. (2015). Attitudes toward authoritarian Government, corruption and obedience to the law among lower-secondary students in Latin America: A comparative analysis. *6th IEA International Research Conference*. Cape Town, South Africa.

Seligson, M. A. (2006). The measurement and impact of corruption victimization: Survey evidence from Latin America. *World Development*, *34*(2), 381–404. https://doi.org/10.1016/j.worlddev.2005.03.012

Son Hing, L. S., Bobocel, D. R., Zanna, M. P., & McBride, M. V. (2007). Authoritarian dynamics and unethical decision making: high social dominance orientation leaders and high right-wing authoritarianism followers. *Journal of Personality and Social Psychology*, *92*(1), 67–81. https://doi.org/10.1037/0022-3514.92.1.67

Stapleton, L. M. (2013). Incorporating sampling weights into single- and multilevel analyses. In L. Rutkowski, M. von Davier, & D. Rutkowski (Eds.), *Handbook of international large scale assessment: Background, technical issues, and methods of data analysis* (pp. 363–388). Boca Raton, London, New York: Chapman and Hall/CRC.

Stapleton, L. M., Yang, J. S., & Hancock, G. R. (2016). Construct meaning in multilevel settings. *Journal of Educational and Behavioral Statistics*, *41*(5), 481–520. https://doi.org/10.3102/1076998616646200

Tan, X., Liu, L., Zheng, W., & Huang, Z. (2016). Effects of social dominance orientation and right-wing authoritarianism on corrupt intention: The role of moral outrage. *International*

*Journal of Psychology*, 51(3), 213-219. https://doi.org/10.1002/ijop.12148

Van Hiel, A., Pandelaere, M., & Duriez, B. (2004). The impact of need for closure on conservative beliefs and racism: Differential mediation by authoritarian submission and authoritarian dominance. *Personality and Social Psychology Bulletin*, *30*(7), 824–837. https://doi.org/10.1177/0146167204264333

Vollebergh, W. (1996). The development of authoritarianism in adolescence: Longitudinal change and the impact of age, gender and educational level. In K. Hurrelmann & S. Hamilton (Eds.), *Social problems and social contexts in adolescence: Perspectives across boundaries* (pp. 325–351). New York: Aldine de Gruyter.

Wang, T. Y., & Bernardo, A. B. I. (2017). Through the back door: Personality factors predict acceptance of illegal zou hou men among Chinese people. *Personality and Individual Differences*, *119*, 194–197. https://doi.org/10.1016/j.paid.2017.07.021

Whitley, B. E., & Lee, S. E. (2000). The relationship of authoritarianism and related constructs to attitudes toward homosexuality. *Journal of Applied Social Psychology*, *30*(1), 144–170. https://doi.org/10.1111/j.1559-1816.2000.tb02309.x

Zakaria, P. (2018). Religiosity and corruption. In I. Kubbe & A. Engelbert (Eds.), *Corruption and Norms* (pp. 69–90). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-319-66254-1_5